



# Australian Bureau of Statistics

## 6278.0 - Education and Training Experience, 2009

Latest ISSUE Released at 11:30 AM (CANBERRA TIME) 30/03/2010

## Summary

### Main Features

#### NOTES

#### ABOUT THIS PUBLICATION

This publication presents results from the Survey of Education and Training (SET) which was conducted nationally by the Australian Bureau of Statistics (ABS) from March to June 2009. Information was collected, by personal interview, from individuals on their participation in education and training and on their educational attainment.

This publication contains a cross-section of results relating to education and training and includes a number of time series tables. Analytical text to support the tables is provided in the Summary of Findings and differences between data items discussed are statistically significant unless otherwise specified. The Explanatory Notes provide information about the survey design and methodology, the quality and interpretation of survey results, and information about other products and services available or planned.

This publication includes Data Cubes in spreadsheet format which are available on the ABS web site <<http://www.abs.gov.au>>. Data Cubes will also be made available for each State or Territory where data quality and confidentiality requirements permit.

#### CHANGES IN THIS ISSUE

As a result of a major review of SET, which was undertaken in consultation with key stakeholders in 2007, a number of changes were introduced in the 2009 cycle. The scope of the SET was modified in 2009 to include persons aged 15-74. However, the bulk of the questionnaire was asked of persons aged 15-64 years and persons aged 65 to 74 years who were in or marginally attached to the labour force. Persons aged 65--74 years who were in scope but not in the population of interest were sequenced to the end of the questionnaire once their labour force status had been established. For further details, see paragraphs 4-7 of the Explanatory Notes.

The content of SET also changed in 2009. Most notably, the definitions of learning activities have been aligned with the international **Classification of learning activities** (CLA), resulting in the inclusion of a third category of learning. Participation in informal learning was collected for the first time, to capture information about lifelong learning undertaken by respondents. Information collected about formal qualifications was also expanded to include all formal qualifications completed by respondents rather than the highest three.

Significant definitional changes have been introduced to the 'work-related training' module

and an education and employment outcomes topic has been included within the questionnaire. There have also been a number of classificatory changes to align with new ABS standards. Further details can be found in paragraphs 32-53 of the Explanatory Notes and in the Glossary.

## **ROUNDING**

As estimates have been rounded, discrepancies may occur between the sums of the component items and totals.

## **INQUIRIES**

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070.

# **Summary of findings**

## **SUMMARY OF FINDINGS**

### **PARTICIPATION IN LEARNING**

Education and training contribute to personal and economic well-being and to Australia's knowledge base. In this publication learning has been classified into three distinct categories:

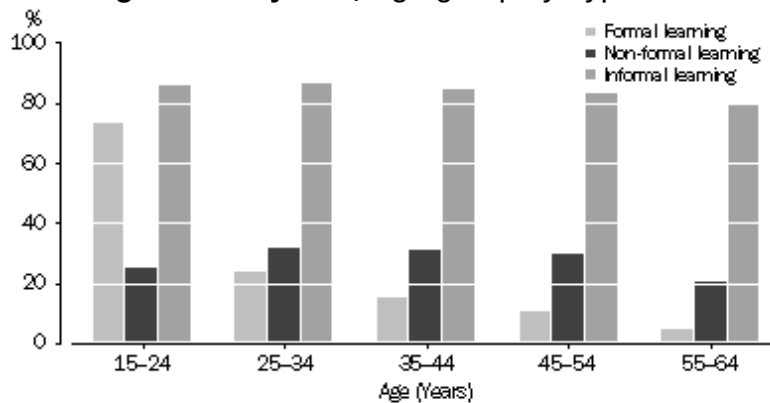
- Formal learning is structured, taught in educational institutions and organisations, as well as through the workplace, and leads to a recognised qualification.
- Non-formal learning is structured, taught in educational institutions and organisations, as well as through the workplace, but does not lead to a recognised qualification.
- Informal learning is unstructured, non-institutional learning activities related to work, family, community or leisure.

In 2009, almost nine in every ten (88%) persons aged 15-64 years had participated in some type of learning during the 12 months prior to the survey. It was estimated that of those aged 15-64 years:

- 3.8 million (26%) participated in formal learning;
- 4.0 million (28%) participated in non-formal learning;
- 12.1 million (84%) participated in informal learning.

Informal learning is the most common type of learning across all age groups with participation rates ranging from 79% of those aged 55-64 years up to 87% of persons 25-34 years old. Participation in formal learning decreases by age group, from 74% of persons aged 15-24 years to 5% of those aged 55-64 years. Non-formal learning is more popular with persons aged 25-34 years (32%) than those aged 15-24 (25%) and 55-64 (20%) years. (Table 1)

**Persons aged 15-64 years, Age group by Type of learning(a)**



(a) In the 12 months prior to the survey.

Persons in the labour force are more than twice as likely to have participated in non-formal learning (32%) than those not in the labour force (14%). Persons employed full-time were half as likely to be undertaking formal learning (18%) as those employed part-time (37%) while 30% of persons not in the labour force and 42% of the unemployed participated in formal learning. Persons not in the labour force are much less likely to have participated in non-formal learning (14%) than formal (30%) or informal (74%) learning. (Table 1)

Persons aged 15-64 years with a disability had similar levels of participation to those without a disability in non-formal (26% vs 28%) and informal (82% vs 85%) learning but they were less likely to have undertaken formal learning (18% vs 30%). (Table 1)

Persons aged 15-64 years in the lowest equivalised weekly household income quintile were more likely to have participated in formal learning in the 12 months prior to the survey than those in the highest quintile (26% vs 23%) but they were less likely to have undertaken non-formal (16% vs 39%) or informal (74% vs 92%) learning. (Table 1)

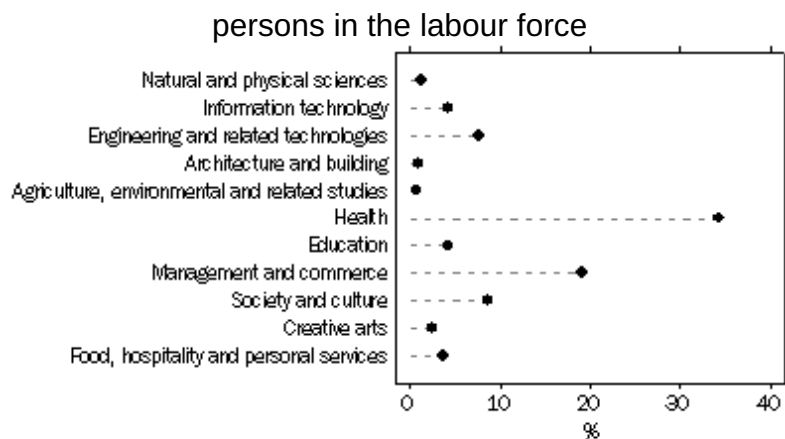
## **PARTICIPATION IN NON-FORMAL WORK-RELATED LEARNING**

Non-formal learning comprises courses that do not result in a qualification. Participation in non-formal work-related learning in the 2009 SET included persons who participated in non-formal learning for the following reasons; to get a job, to get a different job or promotion, as a requirement of their job, because they wanted extra skills for their job, to start their own business, to develop an existing business, or to try for a different career. Information on the four most recent non-formal courses was collected from the 12 months prior to the survey.

Approximately 2.5 million (74%) employed persons aged 15-74 years undertook non-formal work-related training in the 12 months prior to the survey (Table 18 and 22). Persons employed full-time were more likely to participate in work-related training than those employed part-time (79% compared with 62%). (Table 22)

Of the approximately 4.4 million non-formal work-related courses undertaken in the 12 months prior to the 2009 SET by persons aged 15-74 years in the labour force, over a third (34%) were in the field of Health, followed by Management and commerce (19%). The main reason for participation in non-formal work-related courses was that it was a requirement of the job (66%). The non-formal work-related courses were generally organised and delivered external to the workplace (45%) and did not result in personal expenses for the participant (86%). (Table 17)

## **PARTICIPATION IN NON-FORMAL WORK-RELATED COURSES(a), by Field of study for**



(a) In the 12 months prior to the survey.

Approximately 4.2 million non-formal work-related courses were undertaken by employed persons aged 15-74 years in the 12 months prior to the survey. (Table 19)

Most non-formal work-related courses (17%) were undertaken by employed persons who worked in the Health care and social assistance industry, followed by the Education and training industry (14%). Non-formal work-related courses were most likely to have been undertaken by Professionals (32%) and persons aged 35-54 (51%) were more likely to have participated than those in other age groups. (Table 18)

#### **PARTICIPATION IN NON-FORMAL WORK-RELATED COURSES(a), Occupation - Employed persons aged 15-74 years**



(a) In the 12 months prior to the survey.

In the 12 months prior to the 2009 SET, almost half (47%) of reported non-formal work-related courses undertaken by employed persons aged 15-74 years were internally provided. The majority of courses in the Public administration and safety industry (63%) were internally provided compared with only 12% of courses in the Agriculture, forestry and fishing industry. (Table 19)

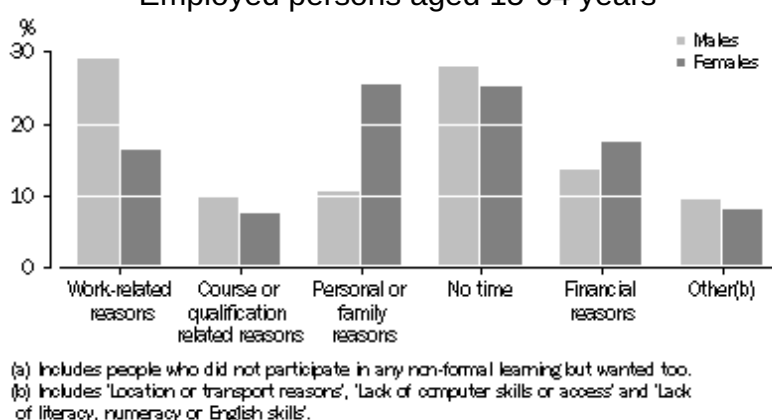
#### **Financial support**

Approximately 14% of non-formal work-related courses undertaken by employed persons aged 15-74 years resulted in costs for the participant, and just over a third (34%) of courses were undertaken by employed persons who were provided with financial support. (Table 19) Non-formal work-related courses that were undertaken by persons aged 15-74 years in the labour force and who participated in the course while they were working, resulted in a median cost to participants of approximately \$165. (Table 17)

## Barriers to learning

There were 11.6 million persons aged 15-64 years who did not want to participate in formal learning and 12.3 million who did not want to participate in non-formal learning in the 12 months prior to the survey. Over a quarter (26%) of those persons who wanted to participate in more non-formal learning but did not reported that a lack of time was their main barrier. Significantly more females (18%) than males (12%) reported that they would have liked to have participated in more non-formal learning in the 12 months prior to the survey but did not. Females were most likely to report personal or family reasons (25%) or a lack of time (25%) as their main barrier to participating in more non-formal learning than any other reason. Males were most likely to report work-related reasons (29%) or a lack of time (28%) as their main barriers. (Table 21)

**MAIN REASON DID NOT PARTICIPATE IN MORE NON-FORMAL LEARNING(a),**  
Employed persons aged 15-64 years

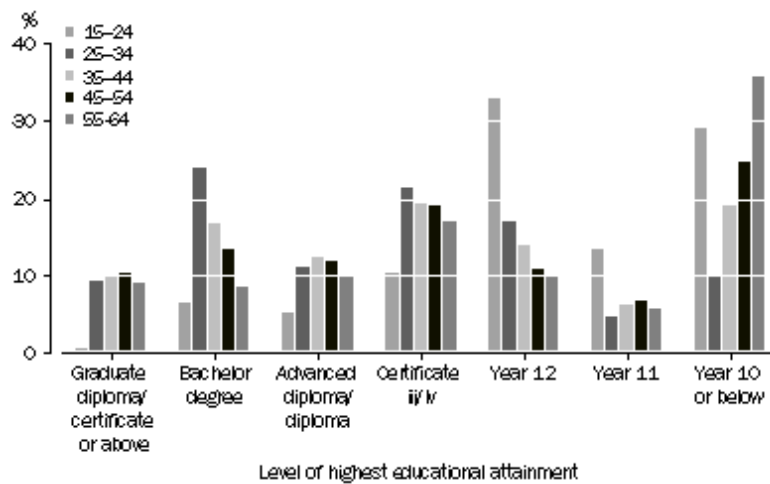


## EDUCATIONAL ATTAINMENT

Educational attainment is seen as a key factor contributing to individual success and Australia's economic prosperity. The level of educational attainment is a component of the stock of skills or competencies available in the population.

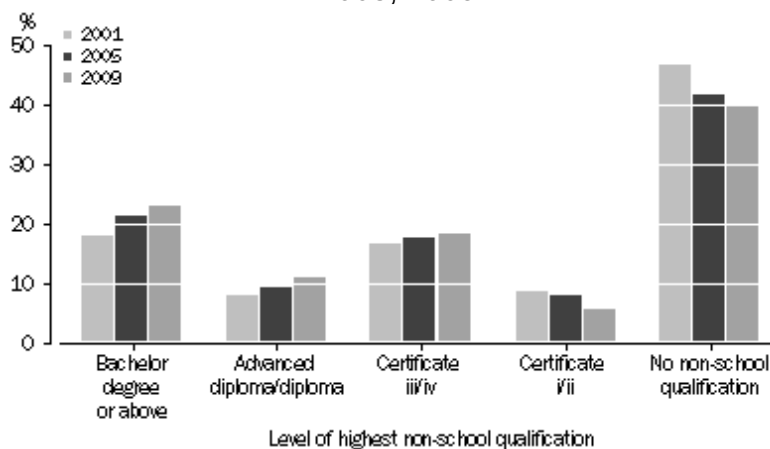
Almost a quarter (24%) of persons aged 25-34 years reported a Bachelor degree as their highest formal qualification with a further 22% reporting a Certificate III/IV. Almost a third (32%) of persons aged 25-34 years reported Year 12 or below as their highest educational attainment. Persons aged 35-44 years were most likely to report a Certificate III/IV (19%) or Year 10 or below (19%) as their highest level of educational attainment. Persons aged 45-54 years and 55-64 years were more likely to report Year 10 or below as their highest qualification than any other level of attainment (25% and 36% respectively). (Table 9)

**Persons aged 15-64 years, Level of highest educational attainment by Age group**



The proportion of persons aged 15-64 years not at school reporting a Certificate III/IV or above as their highest non-school qualification has been steadily increasing from 43% in 2001 to 48% in 2005 and 53% in 2009. The proportion of persons aged 15-64 years not at school, reporting a Bachelor degree as their highest non-school qualification has also been increasing from 18% in 2001 to 23% in 2009. Over the same period, the proportion of persons aged 15-64 years not at school without a non-school qualification has been reducing from 47% in 2001 to 40% in 2009. Persons aged 25-34 years not at school had the largest proportional growth in attainment at the Certificate III/IV level or above of all age groups, increasing 17 percentage points between 2001 and 2009. (Table 16)

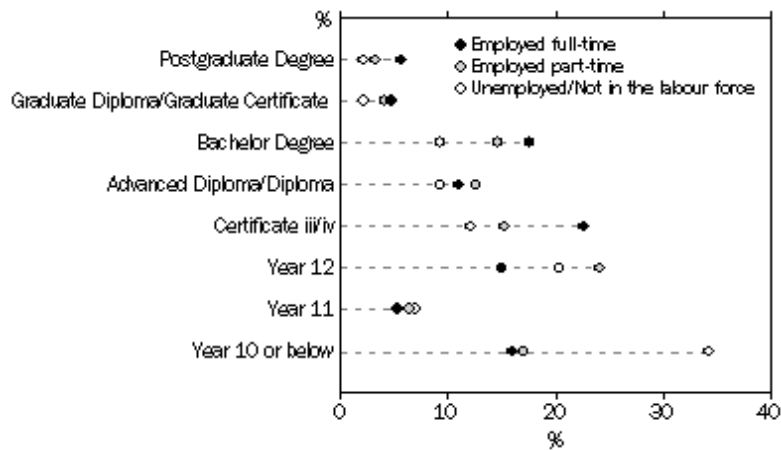
#### Persons aged 15-64 years not at school, Level of highest non-school qualification - 2001, 2005, 2009



### Employment characteristics

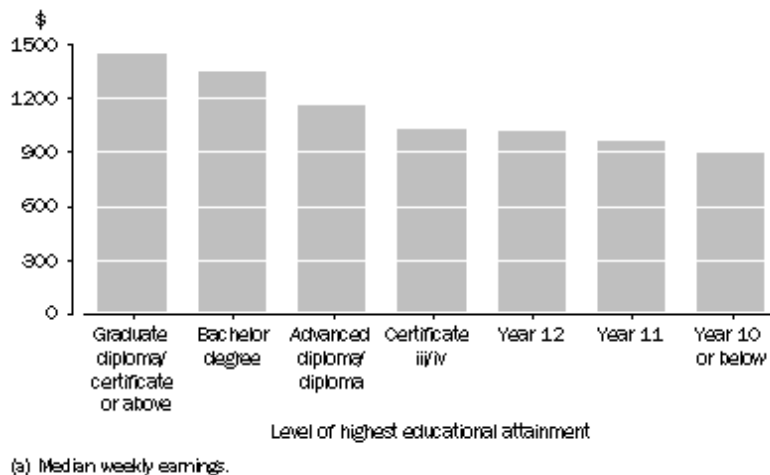
Approximately one-third (34%) of persons aged 15-64 years not at school and who were unemployed or not in the labour force reported that their highest level of educational attainment was Year 10 or below. Conversely, 16% of persons aged 15-64 years who were employed full-time reported that their highest level of educational attainment was Year 10 or below. Persons aged 15-64 years not at school who were employed full-time were more likely to have a Certificate III/IV or higher qualification (62%) than those who were employed part-time (50%). (Table 10)

#### Persons aged 15-64 years not at school, Level of highest educational attainment by Labour force status



Of the approximately 10.2 million employed persons aged 15-64 years not at school, those whose highest educational attainment was a Bachelor degree or higher were most likely to be employed as Professionals (59%) or Managers (15%). People without a non-school qualification were most likely to be employed as Clerical and administrative workers (20%) or Labourers (18%). The median weekly earnings for employed persons aged 15-64 years not at school whose highest educational attainment was a Bachelor degree was \$1,351 compared with \$907 for those with Year 10 or below. (Table 11)

#### Employed persons aged 15-64 years not at school, Earnings(a) by Level of highest educational attainment



### Parental characteristics

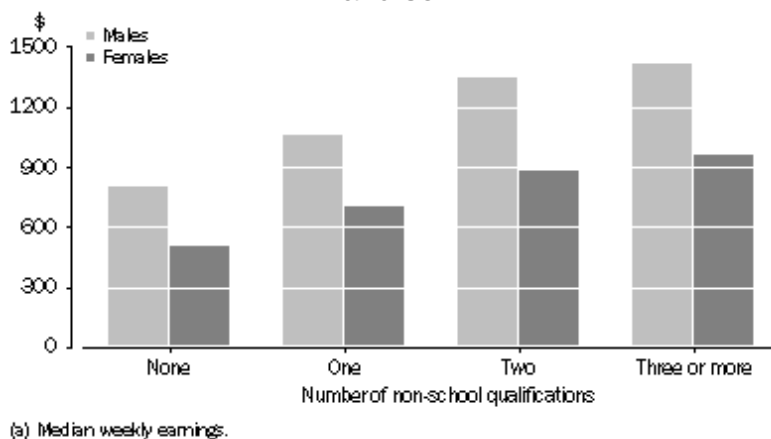
Persons aged 15-24 years not at school were less likely to have completed Year 12 if neither of their parents had completed Year 12 or higher (55%) than persons where at least one (66%) or both (85%) parents had completed Year 12 or higher. Over half (52%) of males aged 15-24 years not at school did not complete Year 12 if neither parent had completed Year 12 or higher compared with just over one-third (37%) of females. (Table 7)

Persons aged 15-24 years not at school who completed Year 12 and whose parents were both employed were more likely to have participated in both formal (55%) and non-formal (23%) learning in the 12 months prior to the survey than persons who had neither parent employed (43% and 15% respectively). Females aged 15-24 years who completed Year 12 and whose parents were both employed were more likely (79%) to have participated in any types of learning in the 12 months prior to the survey than their male counterparts (70%). (Table 7)

## Multiple qualifications

In 2009, over one-third (34%) of persons aged 15-64 years had completed one non-school qualification with a further 14% having completed two non-school qualifications and 9% having completed three or more non-school qualifications. The median weekly earnings for males who had completed one non-school qualification was significantly higher than their female counterparts (\$1,055 and \$700 respectively). This difference continued as the number of non-school qualifications increased. (Table 15)

### Persons aged 15-64 years, Earnings(a) by number of non-school qualifications completed and sex



## Work history

Over one in five (22%) persons aged 15-64 years who had completed at least one non-school qualification reported that they were not employed before but were employed six months after completing their first qualification. In contrast, 14% of persons who had completed multiple non-school qualifications had moved into employment six months after completing their most recent qualification. The most commonly reported impact of the most recent qualification on the work history of persons aged 15-64 years who had completed multiple non-school qualifications was that they performed the same job to a higher standard or undertook additional duties (32%).

A person's first non-school qualification is more likely to lead to a change in career with 34% of persons changing careers after their first and 20% after their most recent subsequent qualification. (Table 14)

## About this Release

Presents results from the 2009 Survey of Education and Training. Data provided focuses on participation in education and training; completed qualifications; level and field of educational attainment; details of training courses completed; training outcomes; difficulties, barriers and employer support to education and training. Some State and Territory data are also provided.

# Explanatory Notes

## Explanatory Notes

### EXPLANATORY NOTES

#### INTRODUCTION

**1** The statistics in this publication were compiled from data collected in the Survey of Education and Training (SET) which was conducted throughout Australia from March to June 2009.

**2** The SET provides a range of key indicators on educational participation, attainment and learning. Detailed information on the following topics was collected:

- General demographic information
- Parental information
  - educational attainment
  - employment status
  - occupation
- Employment characteristics
  - labour force status
  - occupation
  - industry
  - sector of employment
  - duration of employment or unemployment
  - hours worked
  - trade union membership
- Participation in education
  - school
  - current study
  - educational attainment
  - formal learning in the last 12 months
- Education and employment outcomes
  - first qualification
  - most recent qualification
  - Non-formal learning
  - work-related courses
  - types of financial support
  - types of expenses
  - participation in training
  - time spent on training
  - training costs
  - Informal learning
- Barriers to learning
  - access
  - difficulties
- Health and disability
- Personal income

**3** The statistics included in this publication present a broad overview of the data items collected in the SET. Emphasis has been given to providing information on key measures

such as educational attainment and participation in education and training.

## **SCOPE OF THE SURVEY**

**4** The SET is a household survey which was conducted in both urban and rural areas in all states and territories, except for very remote parts of Australia. Queensland, South Australia, Western Australia and the Northern Territory all have very remote areas. With the exception of the Northern Territory, the population living in very remote areas represents only a small proportion of the total population (approximately 2%). For this, and other practical reasons, no adjustment was made to state population benchmarks when deriving the survey results. This exclusion is unlikely to impact on national estimates, and will only have a minor impact on any aggregate estimates that are produced for individual states and territories, except the Northern Territory where the excluded population accounts for over 23% of persons.

**5** Only people who were usual residents of private dwellings in Australia were covered by the SET. Private dwellings are houses, flats, home units and any other structures used as private places of residence at the time of the survey. People usually resident in non-private dwellings such as hotels, motels, hostels, hospitals and short-stay caravan parks were not included in the survey. Usual residents are those persons who usually live in a particular dwelling and regard it as their own or main home. Visitors to private dwellings are not included in the interview for that dwelling. However, if they are a usual resident of another dwelling that is in the scope of the survey they have a chance of being selected in the survey or, if not selected, they will be represented by similar persons who are selected in the survey.

**6** Persons aged 15-74 years were included in the scope of the SET. The bulk of the questionnaire was asked of persons in the population of interest which is those aged 15-64 years and persons aged 65-74 years who were in or marginally attached to the labour force. Persons aged 65-74 years who were in scope but not in the population of interest were sequenced to the end of the questionnaire once their labour force status had been established.

**7** The following non-residents were excluded from the resident population estimates used to benchmark the SET results, and were not interviewed:

- diplomatic personnel of overseas governments;
- persons whose usual place of residence was outside Australia;
- members of non-Australian defence forces (and their dependants) stationed in Australia.

## **SURVEY DESIGN**

### ***Sample size and selection***

**8** The 2009 SET was designed to provide reliable estimates at the national level and for each state and territory.

**9** Dwellings in each state and territory were selected at random using a multi-stage area sample of private dwellings. The initial sample for the 2009 SET consisted of approximately 16,400 private dwellings. Of the approximately 13,200 households that remained in the survey after sample loss, approximately 11,800 (89%) were fully responding. As well as persons from fully responding households, SET included 452 fully responding persons from 292 partially responding households. The inclusion of these persons had an impact on the

estimation of household income because of non-response by other members and this is further discussed in paragraph 31. In total, 23,807 persons fully responded to the 2009 SET.

### SET FINAL SAMPLE, Number of persons - 2009

|                              | Capital City<br>'000 | Balance of State or Territory<br>'000 | Total<br>'000 |
|------------------------------|----------------------|---------------------------------------|---------------|
| New South Wales              | 2 271                | 1 460                                 | 3 731         |
| Victoria                     | 2 333                | 1 051                                 | 3 384         |
| Queensland                   | 1 372                | 1 577                                 | 2 949         |
| South Australia              | 2 034                | 801                                   | 2 835         |
| Western Australia            | 2 245                | 909                                   | 3 154         |
| Tasmania                     | 1 172                | 1 923                                 | 3 095         |
| Northern Territory           | 1 371                | 406                                   | 1 777         |
| Australian Capital Territory | 2 882                | -                                     | 2 882         |
| Australia                    | 15 680               | 8 127                                 | 23 807        |

- nil or rounded to zero (including null cells)

### *Non-responding households*

**10** Approximately 3,230 households in the 2009 SET did not respond at all to the questionnaire, or did not respond adequately. Such households included:

- households affected by death or illness of a household member
- households in which person(s) in the household did not respond because they could not be contacted, had language problems or refused to participate
- households in which person(s) did not respond to key questions.

### *Partial response*

**11** Some households did not supply all the required information but supplied sufficient information to be retained in the SET sample. Such partial response occurred when:

- at least one in scope person in the household responded but information could not be collected from the entire household. The information from the responding member(s) of the household was included however, some household details such as the estimation of household income are missing as information from all members of the household is incomplete.
- earnings, income or training cost information is missing from a person's record because they are unable or unwilling to provide the data but they responded to other key variables in the survey.

## DATA COLLECTION

**12** Trained ABS interviewers conducted personal interviews at selected dwellings from the beginning of March 2009 to the end of June 2009. Interviews were conducted using a Computer Assisted Interviewing (CAI) questionnaire. CAI involves the use of a notebook computer to record, store, manipulate and transmit the data collected during interviews.

**13** One person in the household, aged 18 years or over, provided basic household information including age, sex, Indigenous status, country of birth and relationships for all household members. Personal interviews were then conducted with all persons aged 15-74

years. The bulk of the questionnaire was asked of persons in the population of interest which is those aged 15-64 years and persons aged 65-74 years who were in or marginally attached to the labour force. Persons aged 65-74 years who were in scope but not in the population of interest were sequenced to the end of the questionnaire once their labour force status had been established.

## **WEIGHTING, BENCHMARKING AND ESTIMATION**

### ***Weighting***

**14** Weighting is the process of adjusting results from a sample survey to infer results for the total population. To do this, a 'weight' is allocated to each person. The weight is a value which indicates how many population units are represented by the sample unit.

**15** The first step in calculating weights for each person is to assign an initial weight, which is equal to the inverse of the probability of being selected in the survey. For example, if the probability of a person being selected in the survey was 1 in 600, then the person would have an initial weight of 600 (that is, they represent 600 people).

### ***Benchmarking***

**16** The SET weights were calibrated to align with independent estimates of the population by sex, age, state or territory of usual residence, section of state or territory and labour force status. Weights calibrated against population benchmarks ensure that the survey estimates conform to the independently estimated distribution of the population rather than to the distribution within the sample itself. Calibration to population benchmarks helps to compensate for over or under-enumeration of particular categories of persons which may occur due to either the random nature of sampling or non-response.

**17** The 2009 SET was benchmarked to the estimated resident population (ERP) aged 15-74 years living in private dwellings in each state and territory, excluding the ERP living in very remote areas of Australia, at May 2009. The SET estimates do not (and are not intended to) match estimates for the total Australian resident population obtained from other sources (which include persons and households living in non-private dwellings such as hotels and boarding houses, and in very remote parts of Australia).

### ***Estimation***

**18** Survey estimates of counts of persons are obtained by summing the weights of persons with the characteristic of interest. Estimates of other counts (i.e. training courses and qualifications) are obtained by multiplying the characteristic of interest by the weight of the reporting person, and then aggregating.

## **RELIABILITY OF ESTIMATES**

**19** All sample surveys are subject to error which can be broadly categorised as either:

- sampling error; or
- non-sampling error.

**20** Sampling error occurs because only a small proportion of the total population is used to produce estimates that represent the whole population. Sampling error can be reliably

measured as it is calculated based on the scientific methods used to design surveys.

**21** Non-sampling error may occur at any stage throughout the survey process. For example, persons selected for the survey may not respond (non-response); survey questions may not be clearly understood by the respondent; responses may be incorrectly recorded by interviewers; or there may be errors in coding or processing survey data.

### ***Sampling error***

**22** Sampling error is the difference between the published estimates, derived from a sample of persons, and the value that would have been produced if all persons in scope of the survey had been included. A measure of the sampling error for a given sample estimate is provided by the standard error, which may be expressed as a percentage of the estimate (relative standard error (RSE)). In this publication estimates with an RSE of 25% to 50% are preceded by an asterisk (e.g. \*15.7) to indicate that the estimate should be used with caution. Estimates with RSEs over 50% are indicated by a double asterisk (e.g.\*\*2.8) and should be considered unreliable for most purposes. For more information refer to the Technical Notes.

### ***Non-sampling error***

**23** Non-sampling error may occur in any collection, whether it is based on a sample or a full count such as a census. One of the main sources of non-sampling error is non-response by persons selected in the survey. Non-response can affect the reliability of results and can introduce bias. The magnitude of any bias depends upon the level of non-response and the extent of the difference between the characteristics of those people who responded to the survey and those who did not.

**24** Non-response occurs when persons cannot or will not cooperate, or cannot be contacted. Non-response can affect the reliability of results and can introduce a bias. The magnitude of any bias depends upon the rate of non-response and the extent of the difference between non-respondents' characteristics and those of persons who responded to the survey.

**25** To reduce the level and impact of non-response the following methods were adopted in this survey:

- face-to-face interviews with respondents;
- the use of interviewers who could speak languages other than English where necessary;
- follow-up of respondents if there was initially no response;
- ensuring the weighted file is representative of the population by aligning the estimates with population benchmarks.

**26** Every effort was made to reduce other non-sampling error by careful design and testing of the questionnaire, training and supervision of interviewers, and extensive editing and quality control procedures at all stages of data processing.

**27** An advantage of the CAI technology used to conduct interviews for this survey is that it potentially reduces non-sampling errors by enabling edits to be applied as the data are being collected. The interviewer is alerted immediately if information entered into the computer is either outside the permitted range for that question, or contradictory to information previously recorded during the interview. These edits allow the interviewer to query respondents and resolve issues during the interview. CAI sequencing of questions is also automated so that respondents are only asked relevant questions and in the appropriate sequence, eliminating interviewer sequencing errors.

## REFERENCE PERIOD AND SEASONAL EFFECTS

**28** The estimates in this publication are based on information collected from March 2009 to June 2009 and, due to reference period and seasonal effects, they may not be fully representative of other time periods in the year. For example, the SET collected information on current study relating to persons enrolled in study at the time of their interview. As the period of collection for SET was from March to June, the reference period for data items on current study was four months. Estimates therefore include enrolments in the first half of 2009, as well as some enrolments which commenced in the second half of 2009. Enrolments are also subject to seasonal variation through the year. Therefore, the SET results could have differed if the survey had been conducted over the whole year or in a different part of the year.

## INTERPRETATION OF RESULTS

**29** Care has been taken to ensure that the results of this survey are as accurate as possible. All interviews were conducted by trained ABS officers. Extensive reference material was developed for use during field enumeration and intensive training was provided to interviewers. There remain, however, other factors which may have affected the reliability of results, and for which no specific adjustments can be made. The following factors should be considered when interpreting the 2009 SET estimates:

- Information recorded in this survey is essentially 'as reported' by respondents, and hence may differ from information available from other sources or collected using different methodologies.
- Responses may be affected by imperfect recall or individual interpretation of survey questions.
- Some respondents may have provided responses that they felt were expected, rather than those that accurately reflected their own situation.

**30** In addition, some respondents were unwilling or unable to provide the required information for a number of SET data items. Where responses for a particular data item were missing for a person or household they were recorded in a 'not known' or 'not stated' category for that data item. These 'not known' or 'not stated' categories are not explicitly shown in the publication tables, but have been included in the totals. Publication tables presenting proportions have included any 'not known' or 'not stated' categories in the calculation of these proportions.

**31** For the personal gross weekly income data item, approximately 2000 people (8%) did not provide an income amount, either because they did not know their income or they refused to answer. Household income is the sum of the personal income of each person aged 15 years and over in the household. Where one person in the household either refused or did not know their income, the income for the household had to be classified as 'not known'. In some households, not all persons responded to the survey however, the records for those persons who did respond were included. Household income for these persons also had to be classified as 'not known'. Mean and median income excluded those households whose income was not known or inadequately reported. There were a number of other data items included in the publication that had missing values. The proportions of these missing values did not exceed 16% for any data item.

### INCOME NON-REPONSE, Persons age 15-74

|  | no.     | %    |
|--|---------|------|
| Personal gross weekly income refused/not known   | 1 979.0 | 8.3  |
| Total household gross weekly income not known due to personal income refused/not known | 3 243.0 | 13.6 |
| Total household gross weekly income not known due to partially responding household    | 452.0   | 1.9  |
| Equivalised household gross weekly income not known                                    | 3 695.0 | 15.5 |

## CLASSIFICATIONS

**32** The 2009 SET used the following Australian standard classifications.

### *Country of Birth*

**33** Country of birth data were classified according to the Standard Australian Classification of Countries (SACC), Second Edition, 2008 (cat. no. 1269.0). The Second Edition amended the Standard Australian Classification of Countries (SACC), 1998 (cat. no. 1269.0) and its subsequent revisions, in incorporating country changes and detailing updated correspondence with the International Organization for Standardization (ISO) and United Nations (UN) classification codes, as well as outlining valid output code options for some supplementary codes. These revisions have been effective since 19 May 2008. The 2009 SET questionnaire listed the 10 most frequently reported countries on the basis of the statistical significance of these languages in the Australian context. Interviewers were instructed to mark the appropriate box, or if the reported country was not among those listed, to record the name of the country for subsequent coding.

### *Education*

**34** Education data were coded to the Australian Standard Classification of Education (ASCED), 2001 (cat. no. 1272.0). The ASCED is a national standard classification which can be applied to all sectors of the Australian education system including schools, vocational education and training and higher education. The ASCED comprises two classifications: Level of Education and Field of Education.

**35** Field of Education is defined as the subject matter of an educational activity. Fields of education are related to each other through the similarity of subject matter, through the broad purpose for which the education is undertaken, and through the theoretical content which underpins the subject matter. There are 12 broad fields, 71 narrow fields and 356 detailed fields. For definitions of these fields see the Australian Standard Classification of Education, 2001 (cat. no. 1272.0).

**36** Level of Education is defined as a function of the quality and quantity of learning involved in an educational activity. There are nine broad levels, 15 narrow levels and 64 detailed levels. For definitions of these levels see the Australian Standard Classification of Education, 2001 (cat. no. 1272.0).

**37** The relationship between categories in the Level of Education classification should be essentially ordinal. In other words, educational activities at Broad Level 1 Postgraduate Degree should be at a higher level than those at Broad Level 2 Graduate Diploma and Graduate Certificate, and so on. However, when this idea is applied to the reality of educational provision in Australia, it is not always possible to assert that an ordinal relationship exists among the various levels of education.

**38** This is particularly evident in the case of the relationship between Certificates I-IV in Broad Level 5 Certificate Level, and School Education included in Broad Level 6 Secondary Education. In this instance, the level of education associated with secondary education may range from satisfying the entry requirements for admission to a university degree course, to the completion of units in basic literacy, numeracy and life skills. Educational activity in these categories may therefore be of an equal, higher or lower level than Certificates found in Broad Level 5 Certificate Level.

**39** Level of highest educational attainment was derived from information on highest year of school completed and level of highest non-school qualification. The derivation process determined which of the 'non-school' or 'school' attainments would be regarded as the highest. Usually the higher ranking attainment is self-evident, but in some cases some secondary education is regarded, for the purposes of obtaining a single measure, as higher than some certificate level attainments.

**40** The following decision table was used to determine which of the responses to questions on highest year of school completed (coded to ASCED Broad Level 6) and level of highest non-school qualification (coded to ASCED Broad Level 5) was regarded as the highest. It is emphasised that this table was designed for the purpose of obtaining a single value for level of highest educational attainment and is not intended to convey any other ordinality.

| Decision Table: Level of Highest Educational Attainment |                          |                                    |                      |                       |                                  |                         |                         |
|---|--------------------------|------------------------------------|----------------------|-----------------------|----------------------------------|-------------------------|-------------------------|
| ASCED Level of education codes                          | Certificate n.f.d. (500) | Certificate III or IV n.f.d. (510) | Certificate IV (511) | Certificate III (514) | Certificate I or II n.f.d. (520) | Certificate II (521)    | Certificate I (524)     |
| Secondary Education n.f.d. (600)                        | Certificate n.f.d.       | Certificate III or IV n.f.d.       | Certificate IV       | Certificate III       | Certificate I or II n.f.d.       | Certificate II          | Certificate I           |
| Senior Secondary Education n.f.d. (610)                 | Senior Secondary n.f.d.  | Certificate III or IV n.f.d.       | Certificate IV       | Certificate III       | Senior Secondary n.f.d.          | Senior Secondary n.f.d. | Senior Secondary n.f.d. |
| Year 12 (611)   | Year 12                  | Certificate III or IV n.f.d.       | Certificate IV       | Certificate III       | Year 12                          | Year 12                 | Year 12                 |
| Year 11 (613)   | Year 11                  | Certificate III or IV n.f.d.       | Certificate IV       | Certificate III       | Year 11                          | Year 11                 | Year 11                 |
| Junior Secondary Education n.f.d. (620)                 | Certificate n.f.d.       | Certificate III or IV n.f.d.       | Certificate IV       | Certificate III       | Certificate I or II n.f.d.       | Certificate II          | Certificate I           |
| Year 10 (621)   | Year 10                  | Certificate III or IV n.f.d.       | Certificate IV       | Certificate III       | Year 10                          | Certificate II          | Year 10                 |
| Year 9 (622)  | Certificate n.f.d.       | Certificate III or IV n.f.d.       | Certificate IV       | Certificate III       | Certificate I or II n.f.d.       | Certificate II          | Certificate I           |
| Year 8 (623)  | Certificate n.f.d.       | Certificate III or IV n.f.d.       | Certificate IV       | Certificate III       | Certificate I or II n.f.d.       | Certificate II          | Certificate I           |
| Year 7 (624)  | Certificate n.f.d.       | Certificate III or IV n.f.d.       | Certificate IV       | Certificate III       | Certificate I or II n.f.d.       | Certificate II          | Certificate I           |

**41** The decision table was also used to rank the information provided in the SET about the qualifications and attainments of a single individual. It does not represent any basis for comparison between differing qualifications. For example, a person whose highest year of school completed was Year 12, and whose level of highest non-school qualification was a Certificate III, would have those responses crosschecked on the decision table and would as a result have their level of highest educational attainment output as Certificate III. However, if the same person answered 'certificate' to the highest non-school qualification question, without any further detail, it would be crosschecked against Year 12 on the decision table as Certificate not further defined. The output would then be Year 12. The decision table, therefore, does not necessarily imply that one qualification is 'higher' than the other. For more

details, see Education Variables, 2002 (cat. no. 1246.0).

**42** Level of education of current study was also derived using the decision table displayed above, taking into account Level of education of school study in current year and Level of education of non-school study in current year for persons who were undertaking concurrent qualifications.

### ***Geography***

**43** Geographical data were classified according to the Australian Standard Geographical Classification (ASGC) (cat. no. 1216.0).

### ***Industry***

**44** Industry data were classified according to the Australian and New Zealand Standard Industrial Classification (ANZIC), 2006 (cat. no. 1292.0).

### ***Language***

**45** All responses to language questions were coded to the Australian Standard Classification of Languages (ASCL), Second Edition, 2005-06 (cat. no. 1267.0). The 2009 SET questionnaire listed the 10 most frequently reported languages first spoken at home and the 10 most frequently reported main languages spoken at home on the basis of the statistical significance of these languages in the Australian context. Interviewers were instructed to mark the appropriate box, or if the reported language was not among those listed, to record the name of the language for subsequent coding.

### ***Occupation***

**46** Occupation data were classified according to the Australian and New Zealand Standard Classification of Occupations (ANZSCO), First Edition, 2006 (cat. no. 1220.0).

## **COMPARABILITY OF TIME SERIES**

**47** Results from the five previous household surveys on this topic were published in Education and Training Experience, Australia, 2005 (cat. no. 6278.0), Education and Training Experience, Australia, 2001 (cat. no. 6278.0), Education and Training Experience, Australia, 1997 (cat. no. 6278.0), Training and Education Experience, Australia, 1993 (cat. no. 6278.0), and How Workers Get their Training 1989 (cat. no. 6278.0).

**48** Essentially the same methodology has been used since 1993 however the scope of the surveys has differed. While the scope of the 2009 survey included persons aged 15-74, the questions focused on persons aged 15-64 years and persons aged 65-74 years who were in or marginally attached to the labour force. The 2005 survey included all persons aged 15 years and over, with those aged 70 years and over asked a subset of questions, regardless of their employment status. The 2001 survey included all persons aged 15-64 years. In comparison, the scope of the 1997 survey was narrower and included persons aged 15-64 years who:

- had worked as wage or salary earners in the previous 12 months;
- were employed, unemployed or marginally attached to the labour force;
- were aged 15-20 years and still at secondary school; and
- were not in the labour force but were studying, or had studied in 1997.

**49** The scope of the 1993 survey was even narrower than that of the 1997 survey. It included persons aged 15-64 years who had worked as wage or salary earners ('employees') in the last 12 months, as well as those who, at the time of the survey, were employers, self-employed, unemployed or marginally attached to the labour force, except:

- persons aged 15-20 years still at school; and
- persons working as unpaid family helpers or solely for payment in kind unless they had also held a wage or salary job in the last 12 months.

**50** Other main differences between the surveys are as follows:

- In 2009, 2005 and 2001, data were collected from Australian Defence Force Personnel living in private dwellings. However, this was not the case in 1997 or 1993.
- In 2001, the ABS Classification of Qualifications (ABSCQ), 1993 (cat. no. 1262.0) was replaced by the Australian Standard Classification of Education (ASCED), 2001 (cat. no. 1272.0). ASCED was introduced to classify educational activity by the level and field of activity. The ABSCQ was used in the 1993 and 1997 surveys and its conceptual basis was of qualifications as a unit of measurement. ASCED was designed to be applied to a number of education-related concepts, such as a 'qualification', 'unit of study', 'module' or 'course'. The classification includes all pre-primary, primary and secondary education, as well as all formal non-school education and training.
- For the 2009 and 2005 surveys, 'work-related training' only referred to courses undertaken to obtain, maintain or improve employment-related skills or competencies. For the 2001 survey, 'training' included 'on-the-job' training. In the 1997 survey the term 'training' also included any study undertaken towards the completion of an educational qualification. See the Glossary for more details.
- Industry data in the 2009 SET have been classified according to the Australian and New Zealand Standard Industrial Classification (ANZIC), 2006 (cat. no. 1292.0). Industry data prior to this were classified according to the Australian and New Zealand Standard Industrial Classification (ANZIC), 1993 (cat. no. 1292.0). Therefore, industry data from SETs prior to the 2009 cycle are not directly comparable with the 2009 industry data.
- Occupation data in the 2009 SET have been classified according to the Australian and New Zealand Standard Classification of Occupations (ANZSCO), First Edition, 2006 (cat. no. 1220.0). Occupation data prior to this were classified according to the Australian Standard Classification of Occupations (ASCO), Second Edition, 1997 (cat. no. 1220.0). Therefore, occupation data from SETs prior to the 2009 cycle are not directly comparable with the 2009 occupation data.

**51** There have also been a number of key questionnaire changes since the 2005 cycle which include:

- the collection of detailed information about all qualifications completed (maximum 15) compared with only the three highest qualifications in 2005;
- the introduction of an education and employment outcomes topic based on the 'First completed' and the 'Most recent completed' non-school qualification(s);
- adopting the concepts of participation in formal, non-formal and informal learning undertaken in the last 12 months based on the international Classification of learning activities (CLA) which was developed by Eurostat and released in July 2006;
- the collection of data about informal learning;
- significant definitional changes to the 'work-related training' module which occurred as a result of a major review of SET, involving consultation with key stakeholders, which was undertaken during 2007. As the 'work-related training' data items are not comparable

over time they should not be used in conjunction with the data in earlier editions of this publication.

- the collection of parental information (employment and education) for persons aged 15-24 years;
- the collection of data about time spent on formal learning and associated costs;
- changes to the collection of employment and income information to align with new ABS standards.

**52** Selected summary results from the 2005 SET have been presented in this publication to allow comparisons over time to be made. The statistical significance of data changes between 2005 and 2009 has been investigated and results that are statistically significant are indicated in tables 4, 10, 12 and 16. A detailed listing outlining the comparability of data items between the 2005 and 2009 cycles will be made available on the ABS website to coincide with the release of the confidentialised unit record files (CURFs) to assist users with understanding the comparability of SET data over time.

**53** The National Centre for Education and Training Statistics (NCETS) in the ABS can provide further advice on the comparability of the 2009 survey results with those from earlier surveys.

## **COMPARABILITY WITH OTHER ABS SOURCES**

**54** Estimates from the SET may differ from the estimates produced from other ABS collections for several reasons. The SET is a sample survey and its results are subject to sampling error. Results may differ from other sample surveys, which are also subject to sampling error. Users should take account of the RSEs on estimates and those of other survey estimates where comparisons are made.

**55** Differences in SET estimates, when compared with the estimates of other surveys, may also result from:

- differences in scope and/or coverage;
- different reference periods reflecting seasonal variations;
- non-seasonal events that may have impacted on one period but not another; or
- because of underlying trends in the phenomena being measured.

**56** Finally, differences can occur as a result of using different collection methodologies. This is often evident in comparisons of similar data items reported from different ABS collections where, after taking account of definition and scope differences and sampling error, residual differences remain. These differences are often the result of the mode of the collections, such as whether data are collected by an interviewer or self-enumerated by the respondent, whether the data are collected from the person themselves or from a proxy respondent, and the level of experience of the interviewers. Differences may also result from the context in which questions are asked, i.e. where in the interview the questions are asked and the nature of preceding questions. The impacts on data of different collection methodologies are difficult to quantify. As a result, every effort is made to minimise such differences.

**57** The following table presents comparisons between a number of key SET data items and similar data items from other ABS sources. These sources include data collected in the Survey of Education and Work (SEW), which were reported in the 2009 issue of Education and Work, Australia, May 2009 (cat. no. 6227.0) and data collected from the Adult Literacy and Life Skills Survey (ALLS), which were reported in the Adult Literacy and Life Skills

Survey, Summary Results (cat. no.4228.0). The comparison shows SET data are broadly consistent with these ABS sources.

### COMPARISON OF DATA FROM SET WITH OTHER ABS SOURCES, Persons aged 15-64 years

|   | SET<br>% | SEW<br>% | ALLS<br>% |
|---|----------|----------|-----------|
| Highest year of school completed                          |          |          |           |
| Year 12   | 51.0     | 54.0     | 50.0      |
| Year 11   | 12.0     | 11.0     | 12.0      |
| Year 10 or below(a)                                       | 36.0     | 34.0     | 39.0      |
| Level of highest non-school qualificaiton                 |          |          |           |
| Postgraduate Degree/Graduate Diploma/Graduate Certificate | 8.0      | 7.0      | 6.0       |
| Bachelor degree   | 14.0     | 16.0     | 15.0      |
| Advanced Diploma/Diploma                                  | 10.0     | 9.0      | 9.0       |
| Certificate III and IV                                    | 17.0     | 16.0     | 16.0      |
| Certificate I and II                                      | 6.0      | 5.0      | 7.0       |
| Total(b)  | 57.0     | 55.0     | 56.0      |
| Main field of highest non-school qualificaiton            |          |          |           |
| Natural and Physical Sciences                             | 2.0      | 2.0      | 2.0       |
| Information Technology                                    | 2.0      | 2.0      | 2.0       |
| Engineering and Related Technologies                      | 9.0      | 10.0     | 10.0      |
| Architecture and Building                                 | 3.0      | 4.0      | 3.0       |
| Agriculture Environmental and Related Studies             | 1.0      | 1.0      | 2.0       |
| Health  | 5.0      | 5.0      | 5.0       |
| Education   | 4.0      | 4.0      | 4.0       |
| Management and Commerce                                   | 13.0     | 13.0     | 14.0      |
| Society and Culture                                       | 7.0      | 8.0      | 7.0       |
| Creative Arts   | 3.0      | 2.0      | 3.0       |
| Food Hospitality and Personal Services                    | 3.0      | 3.0      | 4.0       |
| Labour force status                                       |          |          |           |
| Full-time   | 50.0     | 53.0     | 53.0      |
| Part-time   | 22.0     | 22.0     | 23.0      |
| Unemployed  | 5.0      | 5.0      | 4.0       |
| Not in the Labour Force                                   | 23.0     | 21.0     | 20.0      |
| Country of birth  |          |          |           |
| Born in Australia   | 72.0     | 71.0     | 73.0      |
| Born overseas   | 28.0     | 29.0     | 27.0      |

(a) Includes persons who never attended school.

(b) Includes 'Certificate n.f.d' and 'Level not determined'.

**58** Although both the SET and the SEW are education surveys, there are a number of key differences between them. Conducted on an annual basis, the SEW provides a range of key indicators of educational participation and attainment and data on people's transition between education and work, and involvement in apprenticeships and traineeships. Conversely, the SET is conducted every four years and provides data on the level and outcomes of the individuals education and training. The SET's additional content includes aspects such as income, more extensive education history, and health and disability. The scope of the SEW is broadly the same as the SET however SEW is based on household interviews with any responsible adult whereas the SET interviews each person in the household who is in scope.

### SET PRODUCTS AND SERVICES

**59** Below is information describing the range of data to be made available from the 2009 Survey of Education and Training, both in published form and on request. Products available on the ABS website [www.abs.gov.au](http://www.abs.gov.au) are indicated accordingly.

## ***Education and Training Experience, Australia, 2009 datacubes***

**60** An electronic version of the tables contained in this publication is available on the ABS website ([cat. no. 6278.0](#)), in spreadsheet format. The spreadsheet presents RSEs relating to estimates and/or proportions for each publication table.

### ***State/territory tabulations***

**61** A set of tables in spreadsheet format equivalent to those in this publication will be produced for each state and territory (subject to standard error constraints and excluding time series tables). These tables will be available from the ABS web site [www.abs.gov.au](http://www.abs.gov.au) as Datacubes ([Education and Training Experience, State and Territory tables, Australia cat. no. 6278.0.55.005](#)) in April 2010.

### ***Microdata***

**62** For users who wish to undertake more detailed analysis, microdata from the 2009 SET will be available in May 2010. The microdata will be released in the form of two confidentialised unit record files (CURFs), the basic CURF ([Survey of Education and Training: Basic CURF, Australia cat. no. 6278.0.55.002](#)) and the expanded CURF ([Survey of Education and Training: Expanded CURF, Australia cat. no. 6278.0.55.004](#)). The expanded CURF will contain more detail than the basic CURF and will only be available via the Remote Access Data Laboratory (RADL), which is a secure Internet-based data query service. The basic CURF will be available via CD ROM or RADL.

**63** Technical information describing the content and use of the basic and expanded SET CURFs will be available in the [Technical Manual: Survey of Education and Training, CURF, Australia: Confidentialised Unit Record File \(cat. no. 6278.0.55.001\)](#). Up-to-date information on the ABS RADL service, including information on pricing, 'Applications & Undertakings', and a training manual outlining obligations and responsibilities when accessing ABS microdata, is available on the ABS website via the following link; Remote Access Data Laboratory (RADL). Those wishing to access the 2009 SET microdata should contact the ABS using MiCRO, the ABS online CURF registration system.

### ***Data available on request***

**64** Special tabulations of SET data are available on request and for a fee. Subject to confidentiality and sampling variability constraints, tabulations can be produced from the survey incorporating data items, populations and geographic areas selected to meet individual requirements. These can be provided in printed or electronic form. Please contact the National Information and Referral Service on 1300 135 070 or [client.services@abs.gov.au](mailto:client.services@abs.gov.au) for further information about these or related statistics.

## **ACKNOWLEDGMENT**

**65** ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated; without it, the wide range of statistics published by the ABS would not be available. Information received by the ABS is treated in strict confidence as required by the Census and Statistics Act 1905 (CSA).

## **RELATED PUBLICATIONS**

**66** Listed below is a selection of other ABS publications on related topics which may be of interest. Information about previous and upcoming ABS publications and products can be found on the ABS website <[www.abs.gov.au](http://www.abs.gov.au)>. The ABS also issues a Release Calendar which shows the expected release dates for the upcoming six months.

- A Directory of Education and Training Statistics, 2009 (cat. no. 1136.0) - issued irregularly, last issued in March 2009;
- Adult Learning, Australia, 2006-07 (cat. no. 4229.0) - issued irregularly, first issue 2006-2007, released in December 2007;
- Adult Literacy and Life Skills Survey, Summary Results (cat. no. 4228.0) - issued irregularly, last issue 2006 released in 2008;
- Aspects of Literacy: Profiles and Perceptions, Australia (cat. no. 4226.0) - issued irregularly, last issue 1996 released in April 1997;
- Education and Training Indicators, Australia, 2002 (cat. no. 4230.0) - issued irregularly, first issue released in December 2002;
- Education and Work, Australia, May 2009 (cat. no. 6227.0) - issued annually, last issue May 2009 released in November 2009;
- Education Variables, 2002 (cat. no. 1246.0) - issued irregularly, last issued in December 2002;
- Employer Training Expenditure and Practices, Australia (cat. no. 6362.0) - issued irregularly, last issue 2001-02 released in April 2003;
- Information Paper: Measuring Learning in Australia, Dictionary of Standards for Education and Training Statistics (cat. no. 4232.0.55.001) - issued irregularly, last issue released in October 2004;
- Information Paper: Measuring Learning in Australia, A Framework for Education and Training Statistics (cat. no. 4213.0) - released on a single issue basis in January 2003;
- Information Paper: Measuring Learning in Australia, A Plan to improve the Quality, Coverage and Use of Education and Training Statistics (cat. no. 4231.0) - issued irregularly, first issue released in September 2004;
- Schools, Australia, 2009 (cat. no. 4221.0) - issued annually, last issued in March 2010.

**67** The Education and Training theme page also contains a wealth of information and useful references.

## NEXT SURVEY

**68** The ABS intends to conduct the SET again in 2013.

# Glossary

## GLOSSARY

### Australian Standard Classification of Education (ASCED)

The ASCED is a national standard classification which includes all sectors of the Australian education system: that is, schools, vocational education and training, and higher education. From 2001, ASCED replaced a number of classifications used in administrative and statistical systems, including the ABSCQ. The ASCED comprises two classifications: Level of education and Field of education. See **Australian Standard Classification of Education**,

**2001** (cat. no. 1272.0).

### **Certificate not further defined**

Survey responses were coded to Certificate not further defined (n.f.d.) when there was not enough information to code them to Certificate I, II, III or IV in the **Australian Standard Classification of Education (ASCED), 2001** (cat. no. 1272.0), Level of Education classification.

### **Completed**

The completion of all academic requirements for the conferring of an award from an institution.

### **Consultant**

For the data item 'Delivery of training course', as presented in this publication, a consultant refers to a person or organisation hired or contracted by an employer to deliver a work-related training course.

### **Correspondence or distance education**

A course of instruction that takes place via postal correspondence or electronic media, linking instructions or students who are not together in a classroom for reasons such as distance between home and the educational institution, or illness. Otherwise known as external study.

### **Country of birth**

Country of birth has been classified according to the **Standard Australian Classification of Countries (SACC), Second Edition, 2008** (cat. no. 1269.0).

### **Educational institution or organisation**

An institution or organisation providing education or training such as Universities, TAFEs, Schools, organisations which provide Adult and Community Education, Business Colleges and Professional or Industry Associations.

### **Employed**

Persons who, during the reference week:

- worked for one hour or more for pay, profit, commission or payment in kind in a job or business, or on a farm (comprising employees, employers and own account workers); or
- worked for one hour or more without pay in a family business or on a farm (i.e. contributing family workers); or
- were employees who had a job but were not at work; or
- were employers or own account workers who had a job, business or farm, but were not at work.

### **Employed full-time**

Employed persons who usually worked 35 hours or more a week in all jobs and those who, although usually working less than 35 hours a week, worked 35 hours or more during the

reference week.

### **Employed part-time**

Employed persons who usually worked less than 35 hours a week in all jobs and either did so during the reference week, or were not at work in the reference week.

### **Employee**

A person who works for a public or private employer and receives remuneration in wages, salary, a retainer fee from their employer while working on a commission basis, tips, piece rates, or payment in kind, or a person who operates their own incorporated enterprises with or without hiring employees. In this publication, employee relates to his/her main job.

### **Employee excluding owner managers of incorporated enterprises**

See entries for 'Employee' and 'Owner managers of incorporated enterprises'. This group is comparable with 'Wage or salary earners' presented in editions of this publication prior to 2005. See paragraph 49 of the Explanatory Notes for more details.

### **Employer**

A person who operates his or her own unincorporated economic enterprise or engages independently in a profession or trade, and hires one or more employees.

### **Enrolled**

Refers to persons enrolled for a course of study at an educational institution or organisation (as defined) in the last 12 months. This includes persons who may have completed, deferred or chosen not to complete such a course within the last 12 months, as well as persons who were studying at the time of enumeration.

### **Equivalised household income**

Equivalising adjusts actual income to take into account of the different needs of households of different size and composition. There are economic advantages associated with living with others, because household resources, especially housing, can be shared. The equivalence scale used to obtain equivalised income is that used in studies by the Organisation for Economic Co-operation and Development (OECD) and is referred to as the 'modified OECD scale'. The scale gives a weight of 1.0 to the first adult in the household, a weight of 0.5 for each additional adult (persons aged 15 years and over), and a weight of 0.3 for each child. For each household, the weights for household members are added together to form the household weight. Total household income is then divided by the household weight to give an income that a lone person household would need for a similar standard of living. Equivalised household income can be viewed as an indicator of the economic resources available to each member of the household.

### **Field of education**

Field of Education is defined as the subject matter of an educational activity. It is categorised according to the **Australian Standard Classification of Education (ASCED), 2001** (cat. no. 1272.0) Field of Education classification.

### **Financial support**

Persons who completed at least one formal or non-formal course during the 12 months prior to interview, were asked if they had received financial support from one or more of the following sources in relation to their training and/or study:

- an employer;
- the government; and/or
- family members;
- Those who received employer financial support were asked if their employer had:
  - provided paid time off or study leave;
  - made payments towards HECS/HELP debts;
  - paid for fees;
  - paid for study or training materials;
  - paid accommodation or travel expenses; and/or
  - provided other financial support.

## **Formal Learning**

Refers to learning which is structured, taught learning in institutions and organisations and leads to a recognised qualification issued by a relevant body, in recognition that a person has achieved learning outcomes or competencies relevant to identified individual, professional, industry or community needs. A learning activity is formal if it leads to a learning achievement that is possible to position within the Australian Qualifications Framework (AQF) and includes workplace training if such training results in a qualification.

## **Higher education institution**

An Australian institution providing higher education courses, e.g. Universities; Colleges of Advanced Education; Institutes of Advanced Education; Institutes of Higher Education; Institutes of Tertiary Education; Agricultural Colleges and some Institutes of Technology.

## **Highest year of school completed**

The highest level of primary or secondary education which a person has completed, irrespective of the type of institution or location where that education was undertaken.

## **Household**

A group of related or unrelated persons who usually live in the same dwelling and make common provision for food and other essentials of living; or a lone person who makes provision for his or her own food and other essentials of living without combining with any other person.

## **Incorporated enterprise**

An enterprise which is registered as a separate legal entity to its members or owners (also known as a limited liability company).

## **Income**

Regular and recurring cash receipts before income tax is deducted, including moneys received from wages and salaries, government pensions and allowances, and other regular receipts such as superannuation, worker's compensation, child support, other transfers from other households, scholarships, profit or loss from own unincorporated business or partnership and investment income.

## **Industry**

Industry has been classified according to the **Australian and New Zealand Standard Industrial Classification (ANZSIC), 2006** (cat. no. 1292.0).

## **Informal learning**

Refers to unstructured, non-institutionalised learning activities that are related to work, family, community or leisure. Activities may occur on a self-directed basis, but are excluded from scope if there is no specific intention to learn.

## **Labour force**

For any group, persons who were employed or unemployed, as defined.

## **Labour force status**

A classification of the civilian population aged 15 years and over into employed, unemployed or not in the labour force, as defined. The definitions conform closely to the international standard definitions adopted by the International Conferences of Labour Statisticians.

## **Leave entitlements**

Employees were asked whether they were entitled to paid holiday leave and/or paid sick leave with their employer. Entitlement to paid holiday and/or sick leave is sometimes used as a proxy for determining the permanent or casual status of workers.

## **Level (and Field) not determined**

Level (and Field) not determined includes inadequately described responses and cases where no response was given.

## **Level of education**

Level of education is a function of the quality and quantity of learning involved in an educational activity. It is categorised according to the **Australian Standard Classification of Education (ASCED), 2001** (cat. no. 1272.0) Level of Education classification.

## **Level of highest educational attainment**

Level of highest educational attainment identifies the highest achievement a person has attained in any area of study. It is not a measurement of the relative importance of different fields of study but a ranking of qualifications and other educational attainments regardless of the particular area of study or the type of institution in which the study was undertaken. See paragraphs 36-42 of the Explanatory Notes for how highest level is derived.

For this variable, Level (of highest educational attainment) not determined is used when respondents have given their highest level of school completed and have said they have a non-school qualification but have not supplied a level for the non-school qualification. Their highest level of school completed may well be their highest level of attainment but because the level of their highest non-school qualification is not available, it can not be determined whether their Year 12, 11 or 10 is their highest level of attainment. Level not determined also includes inadequately described responses or where no responses were given.

## **Level of highest non-school qualification**

The highest qualification a person has attained, other than qualifications associated with school education.

## **Main field of education**

Main field of education is defined as the subject matter of an educational activity. It is categorised according to the **Australian Standard Classification of Education (ASCED), 2001** (cat. no. 1272.0) Field of Education classification.

## **Main field of highest non-school qualification**

The main field of study undertaken by a person in completing the person's highest educational qualification, other than attainments of primary or secondary education

## **Main language spoken at home**

The main language spoken by a person in his/her home, on a regular basis, to communicate with other residents of the home and regular visitors to the home.

## **Marginally attached to the labour force**

Persons who were not in the labour force in the reference week, wanted to work and:

- were actively looking for work but did not meet the availability criteria to be classified as unemployed; or
- were not actively looking for work but were available to start work within four weeks or could start work within four weeks if child care was available.

## **Median Weekly Earnings**

Weekly earnings is the amount of weekly pay usually earned while working as an employee, before taxation or other deductions are made. Annual, monthly or fortnightly amounts were converted to their weekly equivalent. If the person had more than one job, then the one in which the person usually worked the most hours was used to calculate weekly earnings. Median weekly earnings is the amount which divides the distribution of employees into two equal groups, one having earnings above and the other having earnings below that amount.

## **Mixed field programmes**

The field Mixed field programmes is categorised according to the **Australian Standard Classification of Education (ASCED), 2001** (cat. no. 1272.0) Field of Education classification.

## **Non-formal learning**

Non-formal learning refers to structured, taught learning, but differs from formal learning in that it does not lead to a qualification within the AQF. It includes non-accredited workplace training, that is, training that does not lead to a recognised qualification.

Some examples of types of non-formal courses include:

- Adult education courses (eg. introduction to computing)

- Hobby and recreation courses (eg. ceramics, jewellery making, dancing)
- Personal enrichment courses (eg. personal finance, sports instruction, public speaking)
- Work-related courses (eg. manager development, job search training, induction courses)
- First aid courses
- Bridging courses
- Statements of attainment

### **Non-school qualification**

Non-school qualifications are awarded for educational attainments other than those of pre-primary, primary or secondary education. They include qualifications at the Post Graduate Degree level, Master Degree level, Graduate Diploma and Graduate Certificate level, Bachelor Degree level, Advanced Diploma and Diploma level, and Certificates I, II, III and IV levels. Non-school qualifications may be attained concurrently with school qualifications.

### **Not in the labour force**

Persons who were not in the categories 'employed' or 'unemployed' as defined. Nor in the 'marginally attached to the labour force' category for 65 - 74 year olds.

### **Occupation**

Classified according to the **Australian and New Zealand Standard Classification of Occupations (ANZSCO), First Edition, 2006** (cat. no. 1220.0).

### **Other educational institution**

Includes institutions or organisations that offer courses and/or training such as Schools, Business colleges, Industry skills centres, Professional or industry associations, Equipment/product manufacturers or suppliers, Job Network members or other government training centres, Adult or community education centres and 'Other' organisations.

### **Owner managers of incorporated enterprises**

Persons who work in their own incorporated enterprise, that is, a business entity which is registered as a separate legal entity to its members or owners (also known as a limited liability company).

### **Participation**

Participation relates to formal, non-formal and informal learning undertaken in last 12 months prior to the survey.

### **Population of interest**

The population of interest for SET 2009 includes:

- All 15 - 64 year olds, and
- 65 - 74 year olds who are:
  - Employed,
  - Unemployed, or
  - Marginally attached to the Labour Force

## Qualification

Formal certification, issued by a relevant approved body, in recognition that a person has achieved learning outcomes or competencies relevant to identified individual, professional, industry or community needs. Statements of attainment awarded for partial completion of a course of study at particular level are excluded.

## Quintiles

Groupings that result from ranking all households or people in the population in ascending order according to some characteristic such as their household income and then dividing the population into five equal groups, each comprising 20% of the estimated population. The same dollar values for household income can therefore appear in separate quintiles.

## Remoteness

The ABS has defined Remoteness within the **Australian Standard Geographical Classification (ASGC)** (cat. no. 1216.0). The ASGC Remoteness Structure is defined only in census years, commencing with the census year 2001, and includes all Collection Districts (CDs) across Australia. The purpose of the Remoteness Structure is to classify CDs which share common characteristics of remoteness into broad geographical regions called Remoteness Areas (RAs). The structure defines six RAs: Major Cities of Australia; Inner Regional Australia; Outer Regional Australia; Remote Australia; Very Remote Australia; and Migratory.

The delimitation criteria for RAs are based on the Accessibility/Remoteness Index of Australia (ARIA), which measures the remoteness of a point based on the physical road distance to the nearest Urban Centre in each of five size classes. For this survey, the ASGC 2006 CDs were used. The RAs were derived by calculating the average ARIA index value for each CD and applying the ASGC 2001 RA criteria. The Remoteness Structure is described in detail in the publication **Statistical Geography Volume 1 Australian Standard Geographical Classification (ASGC) 2001** (cat. no. 1216.0).

## School study

School study is participation in primary or secondary level education regardless of the institution or location where that study took place, including at a Technical and Further Education (TAFE) institution or schooling at home.

## Sector of employment

Sector of employment is used to classify a respondent's employer as a public or private enterprise. The public sector includes all government units, such as government departments, non-market non-profit institutions that are controlled and mainly financed by government, and corporations and quasi-corporations that are controlled by government. All other employers are classified as the private sector.

## Studying full-time

Enrolment in study full-time as reported by the respondent.

## Studying part-time

Enrolment in study part-time as reported by the respondent.

## **Study leading to a qualification**

The reported level of education of any study being undertaken that will lead to formal certification, issued by a relevant approved body, in recognition that a person has achieved learning outcomes or competencies relevant to identified individual, professional, industry or community needs.

## **TAFE**

A Technical and Further Education institution. In Victoria this may also be interpreted as Training and Further Education. In Tasmania TAFE has been split into two new training organisations known as Polytechnic and Tasmanian Skills Institute. Both will be referred to as TAFE in this publication.

## **Training costs incurred by participant**

Persons who completed at least one work-related training course during the 12 months prior to interview were asked whether they had personally paid for any part of their training course. Some examples of costs are: course fees, materials, study related accommodation or travel costs and other expenses.

## **Unemployed**

Persons aged 15 years and over who were not employed during the reference week, and;

- had actively looked for full-time or part-time work at any time in the four weeks up to the end of the reference week; and
- were available for work in the reference week.

## **Wage or salary earner**

An employed person who, during the reference week, worked for an employer for wages or salary in their main job.

## **Work-related non-formal courses**

Non-formal learning was classified as being a work-related course if the main purpose for participating in the learning was one of the following:

- to get a job
- to get a different job or promotion
- it was a requirement of their job
- wanted extra skills for their job
- to start own business
- to develop existing business
- to try for a different career

## **Worked full-time**

Employed persons who usually worked 35 hours or more a week in their current main job and those who, although usually working less than 35 hours a week, worked 35 hours or more during the reference week. For persons who worked with their main period employer who was not their current main employer, it refers to those who usually worked 35 hours or

more a week in that job.

### **Worked part-time**

Employed persons who usually worked less than 35 hours a week in their current main job and either did so during the reference week, or were not at work in the reference week. For persons who worked with their main period employer who was not their current main employer, it refers to those who usually worked less than 35 hours a week in that job.

## **Abbreviations**

### **ABBREVIATIONS**

|        |   |
|--------|---|
| ABS    | Australian Bureau of Statistics                                   |
| ABSCQ  | Australian Bureau of Statistics Classification of Qualifications  |
| ALLS   | Adult Literacy and Life Skills Survey                             |
| ANZSCO | Australian and New Zealand Standard Classification of Occupations |
| ANZSIC | Australian and New Zealand Standard Industrial Classification     |
| AQF    | Australian Qualifications Framework                               |
| ASCED  | Australian Standard Classification of Education                   |
| ASCL   | Australian Standard Classification of Languages                   |
| ASCO   | Australian Standard Classification of Occupations                 |
| ASGC   | Australian Standard Geographical Classification                   |
| CAI    | computer assisted interviewing                                    |
| CLA    | Classification of Learning Activities                             |
| CSA    | Census and Statistics Act 19050                                   |
| CURF   | confidentialised unit record file                                 |
| ERP    | estimated resident population                                     |
| ISO    | International Organization for Standardization                    |
| nfd    | not further defined   |
| NCETS  | National Centre for Education and Training Statistics             |
| RADL   | Remote Access Data Laboratory                                     |
| RSE    | relative standard error   |
| SACC   | Standard Australian Classification of Countries                   |
| SE     | standard error  |
| SET    | Survey of Education and Training                                  |
| SEW    | Survey of Education and Work                                      |
| TAFE   | Technical and Further Education                                   |
| UN     | United Nations  |

## **Quality Declaration - Summary**

### **QUALITY DECLARATION - SUMMARY**

#### **INSTITUTIONAL ENVIRONMENT**

For information on the institutional environment of the Australian Bureau of Statistics (ABS), including the legislative obligations of the ABS, financing and governance arrangements, and

mechanisms for scrutiny of ABS operations, please see ABS Institutional Environment.

## RELEVANCE

The 2009 Survey of Education and Training (SET) provides a range of key indicators on educational participation, attainment and learning for all persons aged 15-64 years and persons aged 65 to 74 years who were in or marginally attached to the labour force. Detailed information on the following topics was collected:

- General demographic information
- Parental information
- educational attainment
- employment status
- occupation
- Employment characteristics
- labour force status
- occupation
- industry
- sector of employment
- duration of employment or unemployment
- hours worked
- trade union membership
- Participation in education
- school
- current study
- educational attainment
- formal learning in the last 12 months
- Education and employment outcomes
- first qualification
- most recent qualification
- Non-formal learning
- work related courses
- types of financial support
- types of expenses
- participation in training
- time spent on training
- training costs
- Informal learning
- Barriers to learning
- access
- difficulties
- Health and disability
- Personal and household income

Information from SET will be used by a wide range of public and private sector agencies, in particular the Department of Education, Employment and Workplace Relations (DEEWR) and state government departments with responsibilities for education and training.

## TIMELINESS

The most recent Survey of Education and Training was conducted throughout Australia from March to June 2009. The ABS has been conducting similar surveys on a four yearly basis since 1989. Data from the 2009 SET were released in **Education and Training Experience**,

**Australia, 2009 (cat. no. 6278.0)**, approximately nine months after the completion of enumeration. Further results from the survey, including State and Territory data cubes, will be released on the ABS website in April 2010. A Basic and Expanded Confidentialised Unit Record File (CURF) will be released in May 2010 for individuals who wish to undertake more detailed analysis of the survey data.

## ACCURACY

The 2009 SET was designed to provide reliable estimates at the national level and for each state and territory.

Dwellings in each state and territory were selected at random using a multi-stage area sample of private dwellings. The initial sample for the 2009 SET consisted of approximately 16,400 private dwellings. Of the approximately 13,200 households that remained in the survey after sample loss, approximately 11,800 (89%) were fully responding. As well as persons from fully responding households, SET included 452 fully responding persons from 292 partially responding households.

As the 2009 SET is a sample survey two types of error are possible: non-sampling error and sampling error.

Non-sampling error arises from inaccuracies in collecting, recording and processing the survey data. Every effort is made to minimise reporting error by the careful design of questionnaires, intensive training and supervision of interviewers, and efficient data processing procedures. One of the main sources of non-sampling error is non-response by persons selected in the survey. Non-response can affect the reliability of results and can introduce bias. The magnitude of any bias depends upon the level of non-response and the extent of the difference between the characteristics of those people who responded to the survey and those who did not.

Sampling error occurs because a sample, rather than the entire population is surveyed. One measure of the likely difference resulting from not including all dwellings in the survey is given by the standard error. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if all dwellings had been included in the survey and about nineteen chances in twenty that the difference will be less than two standard errors.

## COHERENCE

Results from the five previous household surveys on this topic were published in Education and Training Experience, Australia, 2005 (cat. no. 6278.0), Education and Training Experience, Australia, 2001 (cat. no. 6278.0), Education and Training Experience, Australia, 1997 (cat. no. 6278.0), Training and Education Experience, Australia, 1993 (cat. no. 6278.0) and How Workers Get their Training 1989 (cat. no. 6278.0).

Essentially the same methodology has been used since 1993 however the scope of the surveys has differed.

A major review of SET, involving consultation with key stakeholders, was undertaken during 2007. The content of the 2009 SET therefore differed somewhat from the 2005 collection reflecting changes that have occurred in the education and training sector in recent years and increased demand for internationally comparable data.

The Explanatory Notes section of **Education and Training Experience, Australia, 2009 (cat. no. 6278.0)** provides more detailed information on the differences between the ABS education and training surveys over time as well as a summary comparison of key SET variables with other ABS data sources.

## INTERPRETABILITY

The summary publication, **Education and Training Experience, Australia, 2009 (cat. no. 6278.0)**, contains a collection of tables with footnoted data to aid with the interpretation of the survey results. The Summary of Findings comprises analytical text and graphics to support interpretation of the publication tables. Explanatory Notes, a Technical Note, and a Glossary provide additional information on the data, terminology, classifications and other associated technical aspects.

## ACCESSIBILITY

An electronic version of the tables contained in **Education and Training Experience, Australia, 2009 (cat. no. 6278.0)** is available on the ABS website, in spreadsheet format. The spreadsheet presents relative standard errors (RSEs) relating to estimates and/or proportions for each publication table. A set of tables in a spreadsheet format equivalent to those in this publication will also be produced for each state and territory (subject to standard error constraints and excluding time series tables). These tables will be available from the ABS web site <[www.abs.gov.au](http://www.abs.gov.au)> as Datacubes (**Education and Training Experience, State and Territory tables, Australia (cat. no. 6278.0.55.005)**) in April 2010.

For users who wish to undertake more detailed analysis, microdata from the 2009 SET will be available in May 2010. The microdata will be released in the form of two confidentialised unit record files (CURFs), the basic CURF (**Survey of Education and Training: Basic CURF, Australia (cat. no. 6278.0.55.002)**) and the expanded CURF (**Survey of Education and Training: Expanded CURF, Australia (cat. no. 6278.0.55.004)**). The expanded CURF will contain more detail than the basic CURF and will only be available via the Remote Access Data Laboratory (RADL), which is a secure Internet-based data query service. The basic CURF will be available via CD ROM or RADL.

Technical information describing the content and use of the basic and expanded SET CURFs will be available in the **Technical Manual: Survey of Education and Training, CURF, Australia (cat. no. 6278.0.55.001)**. Up-to-date information on the ABS RADL service, including information on pricing, 'Applications & Undertakings', and a training manual outlining obligations and responsibilities when accessing ABS microdata, is available on the ABS website via the following link; [Remote Access Data Laboratory \(RADL\)](#). Those wishing to access the 2009 SET microdata should contact the ABS using [MiCRO](#), the ABS online CURF registration system.

Special tabulations of SET data are available on request and for a fee. Subject to confidentiality and sampling variability constraints, tabulations can be produced from the survey incorporating data items, populations and geographic areas selected to meet individual requirements. These can be provided in printed or electronic form. Please contact the National Information and Referral Service on 1300 135 070 or [client.services@abs.gov.au](mailto:client.services@abs.gov.au) for further information about these or related statistics.

# Data quality (Technical Note)

## TECHNICAL NOTE DATA QUALITY

### RELIABILITY OF THE ESTIMATES

**1** Since the estimates in this publication are based on information obtained from occupants of a sample of dwellings, they are subject to sampling variability. That is, they may differ from those estimates that would have been produced if all dwellings had been included in the survey. One measure of the likely difference is given by the standard error (SE), which indicates the extent to which an estimate may have varied by chance because only a sample of dwellings was included. There are about two chances in three (67%) that a sample estimate will differ by less than one SE from the number that would have been obtained if all dwellings had been included, and about 19 chances in 20 (95%) that the difference will be less than two SEs.

**2** Another measure of the likely difference is the relative standard error (RSE), which is obtained by expressing the SE as a percentage of the estimate.

$$RSE\% = \left( \frac{SE}{estimate} \right) \times 100$$

**3** RSEs for estimates from the 2009 Survey of Education and Training were calculated for each separate estimate and published in the 'direct' form. The Jackknife method of variance estimation is used for this process, which involves the calculation of 60 'replicate' estimates based on 60 different sub samples of the original sample. The variability of estimates obtained from these sub samples is used to estimate the sample variability surrounding the main estimate.

**4** Tables 4, 10, 12 and 16 contain time series estimates from the 2009 and 2005 cycles of the SET. The spreadsheet datacubes associated with the current edition of Education and Training Experience, Australia (cat. no. 6278.0) contain 'direct' RSEs for both the 2005 and 2009 estimates. However, the RSEs published in earlier editions of Education and Training Experience (cat. no. 6278.0) were calculated using previous statistical SE models. These are detailed in Education and Training Experience, Australia, 2005 (cat. no. 6278.0) which is available on the ABS website [www.abs.gov.au](http://www.abs.gov.au). While the direct method is more accurate, the difference between the two is usually not significant for most estimates.

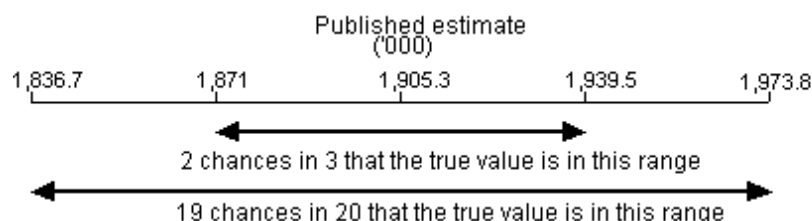
**5** In the tables in this publication, only estimates (numbers, percentages, means and medians) with RSEs less than 25% are considered sufficiently reliable for most purposes. However, estimates with larger RSEs are included and preceded by an asterisk (e.g. \*15.7) to indicate they are subject to high SEs and should be used with caution. Estimates with RSEs greater than 50% are preceded by a double asterisk (e.g. \*\*2.8) to indicate that they are considered too unreliable for general use.

### CALCULATION OF STANDARD ERRORS

**6** Standard errors can be calculated using the estimates (counts or means) and the corresponding RSEs. For example, Table 1 shows the estimated number of persons aged 15-64 years who participated in formal learning in the last 12 months and who were female was 1,905,300. The RSE Table corresponding to the estimates in Table 1 (see Table 1 Relative Standard Errors in the 'Relative Standard Error' section at the end of these Technical Notes) shows the RSE for this estimate is 1.8%. The SE is calculated by:

$$\begin{aligned}
 & SE \text{ of estimate} \\
 &= \left( \frac{RSE}{100} \right) \times \text{estimate} \\
 &= 0.018 \times 1905300 \\
 &= 34,295
 \end{aligned}$$

**7** Therefore, there are about two chances in three that the value that would have been produced if all dwellings had been included in the survey will fall within the range 1,871,005 to 1,939,595 and about 19 chances in 20 that the value will fall within the range 1,836,710 to 1,973,890. This example is illustrated in the diagram below.



## PROPORTIONS AND PERCENTAGES

**8** Proportions and percentages formed from the ratio of two estimates are also subject to sampling errors. The size of the error depends on the accuracy of both the numerator and the denominator. A formula to approximate the RSE of a proportion is given below. This formula is only valid when x is a subset of y:

$$RSE\left(\frac{x}{y}\right) = \sqrt{[RSE(x)]^2 - [RSE(y)]^2}$$

**9** As an example, using estimates from Table 1, of the 3,786,300 persons aged 15-64 years who participated in formal learning in the last 12 months, 1,905,300 are females or 50.3%. The RSE for 1,905,300 is 1.8% and the RSE for 3,786,300 is 1.3% (see Table 1 Relative Standard Errors in the 'Relative Standard Error' section at the end of these Technical Notes). Applying the above formula, the RSE for the proportion of females who participated in formal learning is:

$$RSE\left(\frac{x}{y}\right) = \sqrt{[RSE(x)]^2 - [RSE(y)]^2}$$

$$RSE = \sqrt{(1.8)^2 - (1.3)^2} = 1.2\%$$

**10** Therefore, the SE for the proportion of persons aged 15-64 years who participated in formal learning in the last 12 months and were female, is 0.6 percentage points (=1.2/100 x 50.3). Hence, there are about two chances in three that the proportion of females who participated in formal learning is between 49.7% and 50.9%, and 19 chances in 20 that the proportion is between 49.1% and 51.5%.

## DIFFERENCES

**11** Published estimates may also be used to calculate the difference between two survey estimates (of numbers or percentages). Such an estimate is subject to sampling error. The sampling error of the difference between two estimates depends on their SEs and the relationship (correlation) between them. An approximate SE of the difference between two estimates (x-y) may be calculated by the following formula:

$$SE(x-y) = \sqrt{[SE(x)]^2 + [SE(y)]^2}$$

**12** While this formula will only be exact for differences between separate and uncorrelated characteristics or sub-populations, it is expected to provide a good approximation for all differences likely to be of interest in this publication.

## SIGNIFICANCE TESTING

**13** A statistical significance test for any of the comparisons between estimates can be performed to determine whether it is likely that there is a difference between the corresponding population characteristics. The standard error of the difference between two corresponding estimates (x and y) can be calculated using the formula in paragraph 11. This standard error is then used to calculate the following test statistic:

$$\left( \frac{x-y}{SE(x-y)} \right)$$

**14** If the absolute value of this test statistic is greater than 1.96 then there is statistical evidence of a significant difference in the two populations with respect to that characteristic. This statistic corresponds to a 95% confidence interval of the difference. Otherwise, it cannot be stated with confidence that there is a real difference between the population with respect to that characteristic.

**15** The selected tables in this publication that show the results of significance testing are annotated to indicate where the estimates which have been compared are significantly different from each other with respect to the test statistic. In all other tables which do not show the results of significance testing, users should take account of RSEs when comparing estimates for different populations.

**16** The imprecision due to sampling variability, which is measured by the SE, should not be confused with inaccuracies that may occur because of imperfections in reporting by respondents, recording by interviewers, and errors made in coding and processing data. Inaccuracies of this kind are referred to as non-sampling error, and they occur in any enumeration, whether it be a full count or sample. Every effort is made to reduce non-sampling error to a minimum by careful design of questionnaires, intensive training and supervision of interviewers, and efficient operating procedures.

## RELATIVE STANDARD ERROR

**17** Limited publication space does not allow for the separate indication of the SEs and/or RSEs of all the estimates in this publication, only RSEs for Table 1 are included below. However, RSEs for all tables are available free-of-charge on the ABS website [www.abs.gov.au](http://www.abs.gov.au), released in spreadsheet format as an attachment to this publication.

**TABLE 1. RELATIVE STANDARD ERRORS, Persons aged 15-64 years, Selected characteristics - by type of learning participated in during the last 12 months**

| Type of learning participated in during the last 12 months(a) |                     |                 |                 |
|---|---------------------|-----------------|-----------------|
| Total   |                     |                 |                 |
| formal  |                     |                 |                 |
| and informal  |                     |                 |                 |
| non-learning  |                     |                 |                 |
| Did not participate in learning                               |                     |                 |                 |
| Formal learning   | Non-formal learning | formal learning | TotalProportion |

|  | %          | %          | %          | %          | %          | %        | %        |
|--|------------|------------|------------|------------|------------|----------|----------|
| Age group (years)                            |            |            |            |            |            |          |          |
| 15-24  | 1.8        | 3.1        | 1.5        | 1.6        | 9.7        | 1.1      | 1.1      |
| 25-34  | 4.3        | 3.9        | 3.4        | 2.3        | 6.3        | 2.1      | 2.1      |
| 35-44  | 4.0        | 3.1        | 2.4        | 1.5        | 5.7        | 1.3      | 1.3      |
| 45-54  | 5.4        | 3.1        | 2.6        | 1.4        | 6.0        | 1.4      | 1.4      |
| 55-64  | 9.5        | 4.1        | 3.7        | 1.9        | 4.6        | 1.6      | 1.6      |
| Sex  |            |            |            |            |            |          |          |
| Males  | 2.0        | 2.0        | 1.3        | 0.6        | 4.0        | -        | -        |
| Females                                      | 1.8        | 1.5        | 1.1        | 0.5        | 2.7        | -        | -        |
| Labour force status                          |            |            |            |            |            |          |          |
| Employed full-time                           | 2.8        | 1.9        | 1.5        | 0.8        | 3.8        | 0.7      | 0.7      |
| Employed part-time                           | 2.7        | 3.2        | 2.3        | 1.8        | 4.5        | 1.6      | 1.6      |
| Unemployed                                   | 5.7        | 6.4        | 4.6        | 3.3        | 14.0       | 2.7      | 2.7      |
| Not in the labour force                      | 2.9        | 4.2        | 2.4        | 1.9        | 4.1        | 1.2      | 1.2      |
| Highest year of school completed             |            |            |            |            |            |          |          |
| Year 12                                      | 2.1        | 2.2        | 1.4        | 1.2        | 5.4        | 1.1      | 1.1      |
| Year 11                                      | 4.3        | 4.8        | 3.4        | 2.4        | 6.1        | 2.4      | 2.4      |
| Year 10 or below(b)                          | 3.0        | 3.1        | 2.3        | 1.8        | 3.4        | 1.3      | 1.3      |
| Main language spoken at home                 |            |            |            |            |            |          |          |
| English                                      |            |            |            |            |            |          |          |
| Born in Australia                            | 2.1        | 2.0        | 1.7        | 1.2        | 4.3        | 1.1      | 1.1      |
| Born overseas                                | 6.0        | 4.3        | 3.7        | 2.7        | 8.0        | 2.5      | 2.5      |
| Other language                               |            |            |            |            |            |          |          |
| Born in Australia                            | 9.0        | 8.7        | 7.3        | 6.6        | 15.3       | 6.3      | 6.3      |
| Born overseas                                | 5.9        | 5.9        | 4.6        | 4.7        | 8.8        | 4.3      | 4.3      |
| State/Territory of usual residence           |            |            |            |            |            |          |          |
| New South Wales                              | 2.8        | 3.0        | 2.0        | 1.2        | 5.8        | -        | -        |
| Victoria                                     | 2.9        | 2.8        | 2.0        | 1.0        | 6.7        | -        | -        |
| Queensland                                   | 3.5        | 3.9        | 2.5        | 1.2        | 8.4        | -        | -        |
| South Australia                              | 2.9        | 4.9        | 2.8        | 1.3        | 9.1        | -        | -        |
| Western Australia                            | 3.9        | 3.3        | 2.1        | 1.2        | 7.8        | -        | -        |
| Tasmania                                     | 2.9        | 4.0        | 2.6        | 1.0        | 8.2        | -        | -        |
| Northern Territory(c)                        | 3.5        | 4.8        | 2.8        | 1.8        | 10.5       | -        | -        |
| Australian Capital Territory                 | 3.1        | 2.4        | 1.7        | 1.0        | 9.1        | -        | -        |
| Remoteness                                   |            |            |            |            |            |          |          |
| Major Cities of Australia                    | 1.7        | 1.7        | 1.1        | 0.9        | 3.4        | 0.8      | 0.8      |
| Inner Regional Australia                     | 5.4        | 5.7        | 4.8        | 4.1        | 9.4        | 4.0      | 4.0      |
| Outer Regional Australia                     | 8.5        | 7.9        | 7.3        | 7.2        | 12.4       | 6.7      | 6.7      |
| Remote Australia                             | 25.2       | 21.9       | 22.1       | 22.5       | 31.9       | 21.6     | 21.6     |
| Disability or long-term health condition     |            |            |            |            |            |          |          |
| Has a disability                             | 3.3        | 3.1        | 2.2        | 1.4        | 4.6        | 1.3      | 1.3      |
| Does not have a disability                   | 1.5        | 1.9        | 1.1        | 0.8        | 3.3        | 0.6      | 0.6      |
| Equivalised gross weekly household income(d) |            |            |            |            |            |          |          |
| Quintile 1 (\$0-\$444)                       | 5.0        | 6.4        | 4.4        | 3.4        | 5.0        | 2.6      | 2.6      |
| Quintile 2 (\$444-\$711)                     | 5.3        | 4.7        | 4.3        | 3.5        | 5.7        | 3.1      | 3.1      |
| Quintile 3 (\$711-\$983)                     | 4.9        | 4.8        | 3.8        | 3.5        | 7.5        | 3.3      | 3.3      |
| Quintile 4 (\$984-\$1,364)                   | 5.4        | 4.8        | 4.1        | 3.7        | 9.3        | 3.7      | 3.7      |
| Quintile 5 (\$1,364-\$31,020)                | 5.7        | 4.9        | 4.8        | 3.6        | 11.5       | 3.7      | 3.7      |
| <b>Total</b>                                 | <b>1.3</b> | <b>1.3</b> | <b>0.9</b> | <b>0.4</b> | <b>2.5</b> | <b>-</b> | <b>-</b> |

- nil or rounded to zero (including null cells)

(a) Refers to all types of learning participated in during the last 12 months, therefore people may appear in more than one category.

(b) Includes 'Never attended school'.

(c) Refers to mainly urban areas. See paragraph 4 of the Explanatory Notes for more details.

(d) Quintile dollar ranges are not mutually exclusive. Refer to the Glossary for more information. Excludes persons where household income was not known or not adequately reported. See paragraph 31 of the Explanatory Notes for more details.

© Commonwealth of Australia

All data and other material produced by the Australian Bureau of Statistics (ABS) constitutes Commonwealth copyright administered by the ABS. The ABS reserves the right to set out the terms and conditions for the use of such material. Unless otherwise noted, all material on this website – except the ABS logo, the Commonwealth Coat of Arms, and any material protected by a trade mark – is licensed under a Creative Commons Attribution 2.5 Australia licence